

aggrecan siRNA (bovine): sc-270555

BACKGROUND

The large chondroitin sulfate proteoglycan, aggrecan, is the predominant proteoglycan present in cartilage. Aggrecan is a member of the chondroitin sulphate proteoglycan family, which also includes versican/PG-M, neurocan and brevican. Aggrecan is a complex multidomain macromolecule that undergoes extensive processing and post-translational modification. Aggrecan in cartilage forms aggregates with hyaluronan and link protein, embedded in a collagen network. Aggrecan accounts for the compressive stiffness and resilience of the hyaline cartilage. Many forms of inflammatory arthritis are shown to be accompanied with aggrecan degradation and loss from the cartilage.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ACAN (bovine) mapping to 21.

PRODUCT

aggrecan siRNA (bovine) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see aggrecan shRNA Plasmid (bovine): sc-270555-SH and aggrecan shRNA (bovine) Lentiviral Particles: sc-270555-V as alternate gene silencing products.

For independent verification of aggrecan (bovine) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270555A, sc-270555B and sc-270555C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

aggrecan siRNA (bovine) is recommended for the inhibition of aggrecan expression in bovine cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor aggrecan gene expression knockdown using RT-PCR Primer: aggrecan (bovine)-PR: sc-270555-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.